

The invention includes a method of forming a material which comprises at least two elements. More specifically, the method comprises providing an electrolytic cell comprising a cathode, an anode, and an electrolytic solution extending between the cathode and anode. A metallic product is electrolytically formed within the electrolytic cell. The forming of the metallic product comprises primarily electrorefining of a first element of the at least two elements and primarily electrowinning of a second element of the at least two elements. The invention also includes a mixed metal product comprising at least two elements, such as a product comprising tantalum and titanium.